

REMARKS

Claims 1-19, and 21-47 were previously presented. Claim 20 is currently amended. Claims 48-73 were previously canceled. Accordingly, Claims 1-47 are pending in the application.

Objection to Drawings

The Figure 1A and Figure 1B are previously objected to for not including an indicator labeled L or G. Applicant has submitted revised drawings with these indicators. Additionally, Figure 1A was objected to because the indicator 19 did not indicate an exposed side. Applicant notes that when Figure 1A is a sideview, the prior label 19 indicates an exposed side. To reduce further confusion, the label 19 in revised Figure 1A points to the bottom of the second medium which is an exposed side. Additionally, Applicant has added a label 22 to the revised Figure 1A to provide consistency with the specification.

Rejection of Claims 1-47 Under 35 USC §103

Claims 1-47 are rejected under 35 USC §103(a) as being unpatentable over U.S. Pre-Grant Publication Number 2003/0211383 (Munshi) in view of U.S. Pre-Grant Publication Number 2002/0004169 (Yamada).

Munshi is directed to thermal batteries. In contrast, Yamada is directed to batteries for electronic equipment, such as video cameras or headphone type stereo devices as disclosed in paragraph 3. Munshi actually distinguishes these battery types. For instance, paragraph 4 of Munshi states that “(a)dvances in thermal batteries have not been running parallel to advances in consumer electronics or OEM batteries.” Since Munshi clearly distinguishes his battery from the batteries taught in Yamada, an inventor would not be motivated to combine the teachings of Munshi with the teachings of Yamada. For this reason alone, claims 1-47 are patentable over the cited art.

Additionally, the combination of Munshi and Yamada is not associated with the expectation of success required to support an obviousness rejection. Munshi’s thermal batteries employ an electrolyte that is both inactive and solid at ambient temperatures.

During use of the battery, a heat source must be used to melt and activate the electrolyte as disclosed in paragraph 3 and 28. Accordingly, these batteries are commonly employed in military applications such as missiles and bombs as disclosed in paragraphs 2-3. Yamada does not teach or suggest that his technology is suitable for use with a heated electrolyte that is a solid at ambient temperatures. In fact, Yamada considers temperatures of 80 °C to be a high temperatures as noted when Yamada states “even at elevated temperature of 80 C” in paragraph 6. As a result, an inventor would have no reason to expect success when combining Yamada’s technology with a Munshi’s thermal battery. For this reason alone, claims 1-47 are patentable over the cited art.

Additionally, the Office Action relies on Yamada teaching two layers of active material where one of the layers is a layer of lithium foil. Applicant has reviewed Yamada and is unable to find this teaching. For instance, the Office Action cites Yamada’s Abstract for this teaching. Applicant has reviewed the Abstract and finds that the only teachings that disclose electrode chemistry are directed to the positive electrode where the chemistry specific claims limitation are directed to the anode. Additionally, Yamada teaches that the negative electrode is prepared by coating a negative electrode mixture that contains a negative electrode active material on a negative current collector at paragraph 42. Yamada then teaches that a foil of metal lithium may be used as a negative electrode active material in paragraph 48. Applicant has been unable to find even a suggestion that the foil of metal lithium discussed in paragraph 48 is used as the negative current collector or is even used in conjunction with another layer of material that includes a negative electrode active material. The Examiner is respectfully requested to indicate where these teachings can be found in Yamada. In the absence of this teaching, the combination of Yamada and Munshi does not teach or suggest every element of claims 1-47. For this reason alone, claims 1-47 are patentable over the cited art.

Claims 2, 3, 10, 20, 22, and 26

The Office Action argues that claims 2, 3, 10, 20, 22, and 26 are suggested use claims. This is not an accurate characterization of these claims. For instance, claim 2 specifies that “the first medium is positioned so as to protect at least a portion of the second medium from the electrolytic solution.” The Applicant guesses the Office Action

characterizes this as an intended use because of the language “so as to.” However, this phrase is preceded by the term “is positioned.” As a result, the language “so as to ...” affirmatively limits the position of the first medium relative to the second medium. Since this is an affirmative limitation on the structure of the battery, it cannot be argued that this language amounts to an “intended use.” Applicant notes that this same argument can also be applied to claims 3, 10, 20, 22, and 26.

Additionally, the Office Action argues that the limitations in these claims are inherent because a chemistry that satisfies the terms of the independent claims has been found in the prior art. Even if the Office Action had found a chemistry that satisfied the independent claims, that chemistry would not necessarily satisfy these claims as would be required for a proper inherency rejection. Consider claim 20 which specifies that “the first active material is present in an amount that would cause the first active material to be depleted if the first active material were the only active material in the anode.” A battery with the chemistry set forth in the Office Action could be constructed with enough of the first active material that the first active material would not be depleted even if it were the only active material in the anode and the battery were fully discharged. As a result, mere chemistry does not indicate that claim 20 requirements have necessarily been satisfied. Consider also claim 2 which specifies that “the first medium is positioned so as to protect at least a portion of the second medium from the electrolytic solution.” A battery with the chemistry set forth in the Office Action could be constructed where a foil substrate is between the first medium and the second medium so no portion of the first medium contacts the second medium. In this instance, the first medium would not protect at least a portion of the second medium from the electrolytic solution as is claimed. Accordingly, mere chemistry does not indicate that these claim requirements have necessarily been satisfied.

Because an Office Action must present extrinsic evidence showing why the claim terms **necessarily** result from the cited art in order to properly support an inherency rejection, the Applicant respectfully requests presentation of the required extrinsic evidence.

Claims 17, 18, 32, 33, 34, 38-44, 46, and 47

The Office Action argues that claims 17, 18, 32, 33, 34, 38-44, 46, and 47 are inherent in the cited art because a chemistry that satisfies the terms of the independent claims

has been found in the prior art. Even if the Office Action had found a chemistry that satisfied claim 1, that chemistry would not necessarily satisfy these claims as required for a proper inherency rejection. As described in paragraphs 45 of the current application and as supported in paragraph 49, “the (CAS) can be shifted to an earlier depth of discharge by reducing the ratio of the amount of first active material to the amount of the second active material or shifted to a later depth of discharge by increasing this ratio.” And as noted in paragraph 51, this shift in the CAS can change the duration for which the CAS has the slope specified in the claims. Accordingly, the duration for the CAS is affected by ratios of the chemicals in the battery rather than simply the chemistry. Since the ratios can be selected to the claim terms are satisfied or so the claim terms are not satisfied, the terms of the claims are not necessarily satisfied merely by finding the chemistry.

Because an Office Action must present extrinsic evidence showing why the claim terms **necessarily** result from the cited art in order to properly support an inherency rejection, the Applicant respectfully requests presentation of the required extrinsic evidence.

Double Patenting Rejection

Claims 1-47 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 5, 7, 8, 13-17, 20-22, 24, and 27 of copending Application No. 10/719,279 (‘279) in view of Yamada.

The above arguments also apply to this rejection. For instance, this rejection also relies on Yamada teaching an anode that includes multiple layers of active material. As noted above, the Applicant has been unable to find this teaching in Yamada and the examiner is respectfully requested to indicate where this teaching can be found. Without this teaching, the current claims are patentable over the combination of Yamada and ‘279.

Additionally, the issue in a double-patent rejection is comparison of the claims in one application with the claims in another application to determine whether the claims are patentably distinct. As disclosed in the seventh paragraph of MPEP 804, this policy is to prevent an Applicant from extending the term of one of the patents. As a result, this rejection is effectively arguing that the pending claims are not patentably distinct from the claims in

Application No. 10/719,279. However, in order to make this rejection, the Office Action combines '279 with Yamada. The need to incorporate subject matter from Yamada into the claims of '279 shows that the claims of '279 by themselves do not teach or suggest every element of the current claims. Since the claims of '279 by themselves do not teach or suggest every element of the current claims, the current claims are patentably distinct from the claims of claims of '279 and the double-patenting rejection should be withdrawn. This argument is supported by the non-statutory double-patenting rejections policy discussed in MPEP 804. For instance, if the current claims include elements that are not claimed in '279 and the missing elements are so substantial that another reference must be found to support the missing elements, then it cannot be argued that the current claims extend the term of the '279 application. As a result, the policy behind double-patenting rejections also shows that this rejection should also be withdrawn

CONCLUSION

The Examiner is encouraged to telephone the undersigned with any questions.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Travis Dodd', written over a horizontal line.

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